



BILL RICHARDSON  
GOVERNOR

State of New Mexico  
**ENVIRONMENT DEPARTMENT**

Ground Water Quality Bureau  
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RON CURRY  
SECRETARY  
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DEPUTY SECRETARY

TA-09

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

April 30, 2003

Steven R. Rae, Group Leader  
Water Quality and Hydrology Group  
Risk Reduction and Environmental Stewardship Division  
Los Alamos National Laboratory  
P.O. Box 1663, MS K497  
(RRES-ECR)  
Los Alamos, New Mexico 87545



**RE: Response to the Notice of Intent to Discharge for Los Alamos National Laboratory  
Potassium Iodide Tracer Study in Los Alamos Canyon**

Dear Mr. Rae:

The New Mexico Environment Department (NMED), Ground Water Quality Bureau (GWQB) has reviewed your notice of intent dated December 20, 2002, and associated supplemental information dated March 18, 2003, and April 11, 2003, submitted for the one-time discharge of approximately 475 gallons (1,800 liters) of a 0.067 Molar (M) Potassium Iodide tracer solution at the Los Alamos Canyon Weir. The Los Alamos Canyon Weir is located approximately 5 miles east of Los Alamos near the junction of State Road 4 and State Highway 502, in Section 21, T19N, R6E, Los Alamos County. The notice of intent satisfies the requirements of Section 20.6.2.1201 NMAC of the Water Quality Control Commission (WQCC) Regulations.

Based on the information submitted with your notice of intent, a discharge permit is not being required for this discharge as long as the discharge is as described in the notice of intent, and the associated information referenced above. The Ground Water Quality Bureau has concluded that the proposed discharge will not adversely impact ground water, and a discharge plan will not be required.

The exempt discharge is briefly described as follows: Approximately 475 gallons of a 0.067M Potassium Iodide tracer solution will be applied evenly over a 1800 square meter basin located just above the low-head weir in Los Alamos Canyon. A maximum of 20 kg of Potassium Iodide will be used in the study. Three boreholes, ranging in depth from 75 feet to 370 feet below ground surface, were installed in the canyon to monitor the downward transport of contaminants through the fractured



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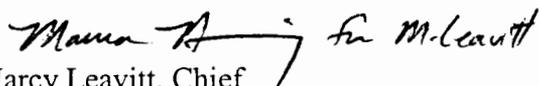
basalt, and potentially to the regional aquifer. The boreholes were drilled at 90°, 45°, and 30° from horizontal, and are fitted with a flexible liner with sensors and sampling ports, or absorbent sampling pads, which enable the boreholes to be used for monitoring moisture, contaminants, and environmental tracers in both saturated perched zones and unsaturated zones. The purpose of the tracer test is to provide hydrogeologic data on travel times through the fractured basalt and provide guidance for the future operation of the Los Alamos Canyon Weir. Ground water below the site is at a depth of approximately 150 feet, with a total dissolved solids concentration of approximately 250 milligrams per liter.

Although a discharge plan is not being required for this discharge at this time, you are not relieved of liability should your operation result in actual pollution of surface or ground waters. Further, this decision by the NMED does not relieve you of your responsibility to comply with any other applicable federal, state, and/or local laws and regulations, such as zoning requirements, plumbing codes and nuisance ordinances.

If at some time in the future you intend to change the amount, the character, or the location of your discharge so that it will not be as described, or if observation or monitoring shows that the discharge is not as described, you must file a new notice of intent with the Ground Water Pollution Prevention Section (GWPPS).

If you have any questions, please contact either Curt Frischkorn of the GWPPS staff at 827-0078, or Maura Hanning, Program Manager of the GWPPS at 827-2945.

Sincerely,



Marcy Leavitt, Chief  
Ground Water Quality Bureau

ML:CSF/csf

xc: Mark Haagenstad, Water Quality and Hydrology Group, Los Alamos National Laboratory,  
P.O. Box 1663, MS K497, RRES-WQH, Los Alamos, NM 87545  
Courte Voorhees, District Manager, NMED District II  
John Young, NMED Hazardous Waste Bureau, P.O. Box 26110, Santa Fe, NM 87502  
Brett Lucas, NMED Surface Water Quality Bureau  
NOI File